

## **People's Attitude and Use of Forestland: Co-Evolution of Forest Administration in Bangladesh**

Mohammad Ali  
Department of Environmental Biology  
University of Guelph, Ontario N1G 2W1, Canada

M. Alamgir Kabir  
Institute of Forestry and Environmental Sciences  
Chittagong University, Chittagong 4331, Bangladesh

A.T.M. Rafiqul Hoque<sup>1</sup>  
Institute of Forestry and Environmental Sciences  
Chittagong University, Chittagong 4331, Bangladesh

This paper explores the influence over time of past policies on people's attitudes towards the use of forestland in Bangladesh. The discourses of the attitudes of people were captured from the observed social tradition towards forest resources. Forests were reserved systematically and solely through the Forest Department. The conservation processes were not participatory, and rights and tenure were strictly controlled. People were socially excluded and alienated from the forest, and the socio-political factors stimulated negative attitudes among people. Forests were considered to be government property, and therefore managing forests was the responsibility of the government. People only used forest resources to meet their own requirements, either with formal permission or illegally. This situation continued even after the independence of Bangladesh in 1971. As a result, the forests of Bangladesh have been degraded heavily in recent decades.

**Keywords:** attitudes to forestry, socio-political history, archival method, colonial rule, local resistance

### **INTRODUCTION**

Limited forest resources and a heavy dependence on forests for livelihoods are considered as the main challenges of sustainable forestland use in Bangladesh. Although the present challenges of forest degradation in many countries are seen as the result of population growth (Allen and Barnes 1985), attitudes to forestland use may also be important. Lonergan (1998) asserted that one of the key issues of forest degradation in developing countries is people's attitudes towards forests. The

---

<sup>1</sup> Corresponding author; current address: Laboratory of Ecology and Systematics, Biology Division, Faculty of Science, University of the Ryukyus, Okinawa 903-0213, Japan.

demand for forest produce is mainly responsible for people's attitudes. This can be affected by more than one policy or societal norm and may depend on factors including ownership, social culture and tradition, religious norms, and political and economic motivations. The policies of the past regimes affected the traditional, religious and economic livelihood of the people in India, and influenced their behaviour in relation to resources (Guha 1989). Bangladesh, as a part of greater India, was under British rule for almost two centuries, from 1757 to 1947, and hence was also under the influence of past regimes. How the impact of past policies has affected people's attitudes towards forests over time is, therefore, an important issue in relation to the environmental sustainability of present forestland use in Bangladesh.

British policy is an important linkage between forestland use and the attitudes of the people. The socio-political explanation of such circumstances is challenging unless the historical discourses are explored on the cognitive basis of actor mobilization of that particular society. Therefore, to discuss the evolution of forest policies in Bangladesh, emphasis is given to the historical information about the nature of the administration by the British regime and the people's involvement in forestland use.

This paper first explains the research methodology adopted, then presents a brief history of Bangladesh forestry. The evolution of forest policy and the influences of different policy measures on the attitudes of people are then discussed. Concluding comments follow.

## RESEARCH METHODOLOGY

This study specifically explores the influence of policy measures and instruments through culture and tradition. The procedure occupies a unique situation between case study and archival method. The archival information has been used to investigate how policy conversations were accumulated through the society to constitute the observed attitudes. The discourses are divided into three sets of entities: how broad policy regimes dealt with resources (particularly land, trees and wildlife); how the regulatory and administrative entity functioned around the social and state interests; and how policy eventually brought about the social consequences.

The circumstances of forestland use were analysed using recorded information whereas policy expectations were identified through policy statements and intentions. Practices before policy implementation were noted from the socio-political history. Direct observation, participant experience and discourse evaluation of opinion of old people from insider observation were applied to record practices after implementation. Ingredients of policy implementation were compared using recorded information on policy and practices. Discourse analysis was then undertaken to establish the influence of policy implementation on changes of practice and the present situation of forestland use by explaining the socio-cultural and socio-economic background of the society. This analysis established four rules for the pursuit of knowledge: (a) accept nothing as true unless clearly recognized as such; (b) solve problems systematically by analyzing them part by part; (c) proceed

from simple to more complex considerations; and (d) review all accessible literature thoroughly to ensure nothing is left out.

To integrate the discourses of the above themes of policy, the storyline technique as outlined in Hajer (1995) was adopted to explain environmental issues which eventually became part of history. The aim of the storyline technique is to establish the past socio-political issues of environment and ecology. A chain of social explanation was used to link the policy regimes and administrative actions to evaluate how the past socio-political issues moulded the people and their attitude to forestland use.

The analytic procedure has been initiated through subject positioning and structural positioning of the observed discourses with the fragmented documentary evidence, which provided a new tool for investigating policy discourse. The idea of using fragmented evidence for investigation is also supported by Blaug (1992). Walsh *et al.* (1999) advocated two sets of social variables as critical for investigating the ability to sustain resources, namely those that measure the human capability to alter the forest, and those that measure the social and institutional constraints outside the control of individuals, households and even the state. Accordingly, both human capability and institutional constraints are linked to the past processes experienced by society. Whether colonial processes or administrative abuses had been the links, sustainability issues are explained by interpreting how the discourses of inability and constraints developed in the society.

Secondary data compiled mainly from the archival and the current statistical information on Bangladesh was used for quantitative and qualitative assessments. The archival search was made in the Indian Institute Library of Oxford University, special collections in the Aberdeen University Library, and collections of the Bangladesh Forest Department (BFD), Bangladesh Forest Research Institute (BFRI), Bangladesh Forest College (BFC), and the Institute of Forestry and Environmental Sciences, Chittagong University (IFESCU). The *Indian Forester*, *Indian Forest Records* and *Indian Forest Bulletin* of the late 19th century and early 20th century have also been surveyed. In order to investigate the people's practices and attitudes, the practical and social experience of the authors and their critical analysis have been captured as insider observation of the society.

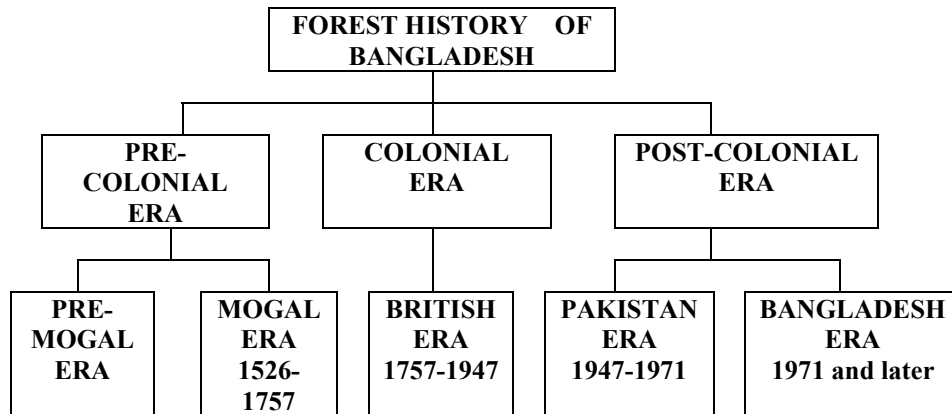
## BRIEF HISTORY OF BANGLADESH FORESTRY

Bangladesh is a small country with a land area of 144,000 km<sup>2</sup> and population of about 133.3 M (World Bank 2003). Most of the designated forest areas lie in the east and south-east hilly regions and south-west corner of coastal land, covering 16% of the total land area of the country. The vegetation cover is estimated to be less than 6% of the total land area (Bhuiyan 1994). People use forests for fuel needs, food production, shelter and shifting cultivation. It would be easier to see the people-forest relationship if it was known how past land-use policies influenced the dynamics of forestland use and the changes in the attitudes of people.

The extreme situations in Bangladesh forestry have developed from socio-environmental incoherence influenced by socio-political, socio-cultural and socio-economic forces. Perhaps the circumstances developed under which the people did not see the ecological crisis or sustainability as a reason for rationality of their

attitude but strove for more liberation of resource use to bring about better economic outcomes. Although the relationship of people with the forests commenced from the origin of human beings, humans were then involved as a part of the forest system. Evidence of first cultivation in the *Ganga* valley (where Bangladesh is located) has been traced back to 4380±130 Before Present (BP). Those first settlers were known as *Arya*, the root meaning of which is ‘plough’ (Bose 1916). The contrast between *Aranaya* (not ploughable, i.e. forest) and the ‘Palli’ (village) set out in the Hindu mythological book *The Righveda* signifies that the phenomenon of nucleation of villages in the Ganga valley is very old.

The discussion about forest degradation in India started relatively recently, towards the end of the 19th century, after the onset of British forest policy. For convenience, the discourse of forestland use in Bangladesh can be considered under various eras, as presented in Figure 1. The discussion of situations before the colonial era will clarify the traditional situation of forestland use in Bangladesh, the then East Bengal.



**Figure 1.** Time regimes of forestland use of Bangladesh

### Forestland Use in the Early Days

Bose (1916) cited from the reports of many ancient travellers – e.g. Fa Hain’s of the 5th century, Houen Tsang of the 7th century and Ibn Batuta of the 11th century – who described the natural beauty and resource richness of Bengal as in perfect harmony with the culture and traditions of the society. During the early period, the utilization of forest resources was for meeting basic human needs, including food, fuel, fibre, building materials and medicines, but was regulated by religious and cultural needs as well as informal rules and systems of management of the communities around the forest. For example, Muslims are the majority religious group in Bangladesh, and believe that whoever plants a tree and looks after it with care, until it matures and becomes productive, will be rewarded in the Hereafter. Buddhists strictly conserved shade trees, particularly Pipal or Ashwattha (*Ficus religiosa*), below which Buddha, the founder of the religion, is said to have achieved his divine wisdom. In practice, the philosophy of ‘Buddhism’ was more conservative to animals than plants, with the killing of animals strongly discouraged.

In contrast to these views, sects of the Hindu religion consider forests as the place of God. Dwivedi (1980) referred to the Hindu mythological word *Devarannya* meaning 'God's grove'. The legend of romance of the Hindu Gods *Krishna* and *Radha* was associated with forests and has been named and still preserved in India as *Sri Brindhaban* (the sacred forest of Romance). The story of the Hindu god-goddess couple *Rama* and *Sita Devi* was also associated with forests. Forests in those myths are revealed as places away from the residential areas. Forests previously were considered as places of worship, which is still the custom among the Hindu people. The famous *Chipco Movement* of Northern India was influenced by such religious feelings.

Within the limit of religion and tradition, communities living in and around the forests enjoyed the forest resources freely in order to meet their requirements (Bose 1916). They did not see themselves as the master of the forest, but treated themselves like other living communities of the forest. The harmonization between nature and the livelihood of people was predominant. At this stage of livelihood, religious belief and culture did not appear as a driving force of deforestation.

In reality, whether culture alone could act as a driving force for deforestation is still doubtful and needs more investigation. Indeed, long after the pre-colonial era, the eminent forester of the British regime, Dr. Brandis (1897), observed the existence of numerous sacred groves in almost all the provinces of India. Community leaders or headmen traditionally sought to hold control over the resources for a sustainable supply for their own clan. Stebbing (1926) described how Indian natives attempted to protect forests from colonial reservation by relating religious issues to forest use. Such annexation of religion was aimed at raising community sentiment against forest reservation. Thus, the concerns of sustainability were included in the culture and tradition of local people to avoid the situation of resource scarcity. However, subsequently cultural attachment of forest converted to tenurial attachment manipulated by the forest policies can be considered as one of the vital points for changed attitude of forestland use. Later when the commercial era of forests commenced, human interaction and competition among the communities living near or around the forests (especially business related people) placed increased demands on forest resources.

Competition for use of forest resources was an important factor because where there were clearly defined rights there was a need for regulations, laws or prohibitions on exercising rights. For traditional societies, the term *norm* used to represent legacy of right. During the British administration, state intervention started to crystallize around the forest as a form of central legacy. Guha (1989) concluded that the mood of assertion and centralization tendency of norms and rights by the state could have a linkage with the destruction of forests. The ingredients of rights and tenures and the mode of state assertion, which have been carried forward and compounded with changes of experience and expertise, can be considered as one of the factors for evaluation of forestland use sustainability of Bangladesh.

## EVOLUTION OF BANGLADESH FOREST POLICY

Forest policy commenced in Bangladesh (the then East Bengal) in 1864 when the country was a part of British Bengal (Stebbing 1926). Bengal was a heavily

populated and agricultural country, and was a potential source of agricultural revenue of British India (Haynes 1998). As revenue was one of the main targets of the British administration, the nature of initial settlement in Bengal was to allocate large tracts of wooded land in perpetuity to landowners or cultivators who at that period had no legal right to them (Stebbing 1921). The problems and difficulties experienced by the British regime in other parts of India were considered carefully in Bengal. Consequently, the beginning of the forest policy in Bengal was instituted with maturity and with the measures of scientific forest policy already in place. To maintain the efficiency of administration, labour policy of forestland use was also adjusted. Forest areas were reserved gradually and systematically. Initially, fringe areas around forests were left under the *Khas Mahal*<sup>2</sup> for local use. But later when reservation was consolidated, those forests were gradually reserved (Buckland 1894). As a result, when forest policy commenced with all its rules and regulation, the supply situation of firewood was suddenly made worse, and the people were puzzled by the coercion of forestry practice (Mukherjee 1958). They experienced a policy change from a *laissez faire* situation of traditional norms with little state intervention, to a legal form of control.

In 1947 greater India became independent as two separate countries, India and Pakistan. Present Bangladesh was the eastern province of Pakistan, previously called East Pakistan, and which was rich in forest resources. The East and West part of Pakistan were totally different geographical and climatic entities separated by about 1000 km of Indian territory. However, meeting the demands of both East and West provinces and the needs of industrialization were mostly dependent on the forest produce of present Bangladesh. In addition, a large tract of forest area was submerged and the forest tribal communities displaced due to the hydro dam built at Kaptai in the Chittagong Hill Tracts to cater for the power supply for industries and development. Little consideration was given to the social, cultural and economic needs of the displaced people or those living around the forests.

Although those developments were considered essential, as a new-born country the then Pakistan continued to implementing the old British policy virtually with no modification other than changing names and titles of the country. Also, due to educational and ethnic reasons, the forest officers recruited and trained by the British administration were mainly from India, and consequently Pakistan forestry had to start with untrained personnel. Moreover, although East Pakistan was rich in forest resources, most of the new recruits were from the West, where forestry training institutions were introduced.

## ANALYSIS OF FOREST POLICY AND PEOPLES' ATTITUDES

The uncertainty created by past policies in people's minds about their future ability to use the forestland influenced the negative attitude to forestland use in Bangladesh. Large expanses of evergreen forest were sold to British companies, in Bengal, in other parts of India (including Cochin, Malabar and Nilgiris), and in Ceylon, in order to raise tea, coffee and rubber plantations (Chandran 1998, Meyer 1998). The

---

<sup>2</sup> *Khas Mahal* is the office where the documentation and revenue matters related to land are controlled.

rest of the forest areas were either managed by the Forest Department or leased to the *Zaminders*<sup>3</sup> for revenue purposes. In practice, the Forest Department at that time acted as the source of revenue for the imperial exchequer. It had to give priority to commercial exploitation and establishing plantations of valuable species, against the interests of the local peasants and tribal populations. As a result, ordinary people were excluded from forestland, i.e. the needs and interests of the ordinary people were overlooked.

A consciousness of the ecological danger of uncontrolled deforestation was evident in the official publications during the first half of the 20th century (Hill 1916). Environmental concern of colonials was perhaps mainly to justify the hardline measures taken in the centralised system of forest management instituted from the 1860s onwards (Pouchepadass 1993). To control deforestation, forest legislation and regulations were passed drastically constraining the rights of access of the local people to the forest.

### Impact of Social Exclusion on People's Attitudes

The process of exclusion started systematically through business monopoly when the East India Company obtained the *Zaigeer* (allotted area for free business) of Chobbish Pargana district. After the takeover of Chittagong in 1760, the tax burden to common people was increased so much that the price of commodities increased. Hamilton (1928) observed the price of a ploughing cow increased 75% in 1761, from Rs 5 usual price to Rs 8 and 12 *Annas*<sup>4</sup>. However, labour prices did not increase, remaining at 5 *Pons* of *Cowries*<sup>5</sup> per day. Gradually, local people were also excluded from various professions in the general sectors including trade and commerce, and work for the locals was restricted to a few manual professions. As a result, more people turned to forests for their subsistence.

The exclusion by taxes was activated through collaborator *Zaminders*. The *Zaminders* were asked to pay higher taxes and revenues from the resources under their possession. The burden of tax ultimately went to the people utilizing the resources in lieu of annual revenue. The *Zaminders* were ruthless to farmers and forest users in their collection of the allotted revenue. Bose (1916) reported that in 1766, immediately after the takeover of all Bengal, the East India Company doubled their dividend from 5% to 10%. In 1770, a severe famine broke out and almost one third of the population of Bengal (10 M) died (Mukherjee 1958), yet the revenue collection was so intense that the total amount exceeded the value achieved in 1768. Moreover, in the famine year, the company increased their dividend further to 12.5% (Bose 1916). Hunter (1876) quoted from India Office Records that the revenue collection was monitored very closely, forcing people to depend on forest resources for extra income which led people to exploit forest resources indiscriminately.

The British East India Company maintained a monopoly and people could not escape rising prices of essential commodities. Revenue was drawn from all sides, for

<sup>3</sup> *Zaminders* were some of the more important landholding families within British India, particularly those who enjoyed princely ranks or titles, and they held considerable power within their territories, including magisterial, recruitment, revenue collection and taxation powers.

<sup>4</sup> 1 Roupee (Rs) = 16 *Annas*.

<sup>5</sup> 1 *Pon* = 20 *Ganda*; four of anything makes a *ganda*; 1 Rs = 32 *Pons* of *Cowries*; a *Cowry* is a type of snail shell found in the sea.

example land rent (for sites of houses and gardens, from fruit trees and from pastures), and rent of fisheries and imports (Hamilton 1928). As a consequence, the Zaminder-patron relationship, which the British had utilised successfully for ruling the country, was damaged. In some parts of India, poor patrons became in conflict with Zaminders (BHBP 1876). Ultimately, a large number of people were deprived of cultivation land for leasing land from the Zaminders and became dependent on the forests. Thus, social exclusion changed the attitude of people to forest resources.

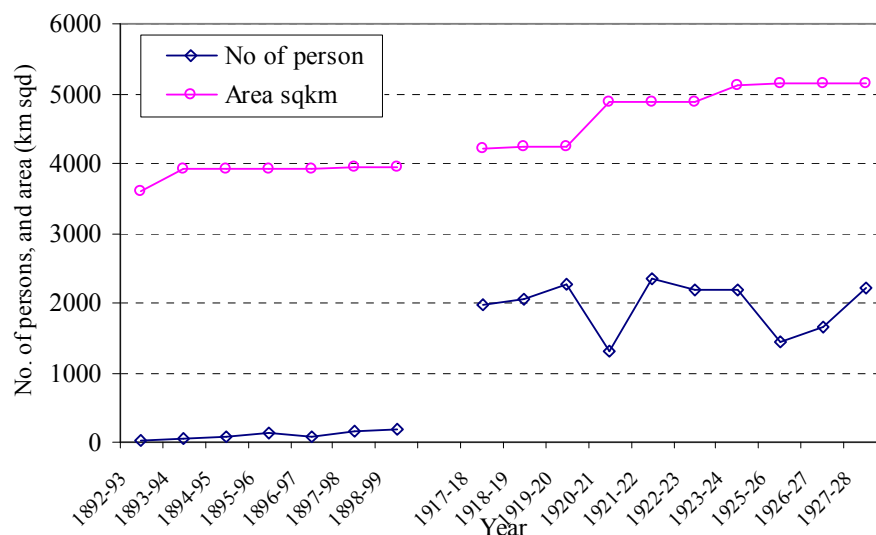
### **Impact of Administration on Peoples' Attitudes**

With the increased pressure of policy measures, people's attitudes to forestland use began to deteriorate. The control of Khas Mahals over the forest areas became weak. Often people did not co-operate with the Khas Mahal, which was a symbol of rebellion against British occupation. Local people began to treat forestland as an asset that was going out of their hands. They tended to collect resources as quickly as possible, assuming that if the resources were not exploited they might be acquired by the state at any time. Moreover, the assumption of local people was that if a forest were depleted of valuable resources, it would draw less attention of the authority for reservation. As a result, people who previously collected forest resources (e.g. firewood) only at the time it was needed, started collecting and accumulating stock at home to meet their requirements for the whole year. Thus the resource stock, that was supposed to grow in the forest to meet future requirements, ended up in stockpiles at the homes of locals. The reports of Farrington (1918, 1919 and 1921) explain how people rushed from timber to firewood collection, as a result of which confiscation of firewood increased and surpassed the timber harvesting from hill forest areas of the then East Bengal.

Milward (1923) and Homfray (1924) explained that the increase in firewood confiscation commenced in 1921-22, when preparation of working plans for the hill divisions was underway. Perhaps at that time, when people saw the activities of scientific forestry (e.g. measurement of areas for working plans), they felt that resources would no longer be available to them. The feelings of such insecurity could have influenced the negative attitude of people to forestland use.

Figure 2 shows that initially when the reservation was small and away from the local area, the number of offenders caught by the Forest Department did not exceed a couple of hundred. But when the reservation area exceeded 4000 km<sup>2</sup>, the number of offenders caught by the department increased tenfold. In practice, during 1917-18 forest reservation extended to the areas close to the villages and the Forest Department was planning to take over the remaining patches of Khas Mahal forests from the control of Commissioner of Civil Division (Cowan 1923). The decrease in the number of offenders in 1921-22, despite the increase of reservation, perhaps was caused by the presence of working plan staff and officers in the field. People were careful to avoid detection when taking part in illegal activities including firewood collection, for fear of prosecution.





**Figure 2.** Progress of reservation of hill forests of Chittagong and number of offenders caught by the Forest Department

### Impact of Forest Regulations on People's Attitudes

The negative attitudes of local people towards forest resources were further exacerbated by unsympathetic regulations passed by the ruling authority, starting with the British era but continuing to the Bangladesh era (Stebbing 1921, Saldanha 1998). For example, to encourage the people to pay land taxes and to co-operate with the Khas Mahal, The British authority started to allocate land rights to people who could reclaim land for ploughing. An official document was issued recognizing rights to a particular piece of land, which was known as *Amalnama*. Rights were transferable and saleable. As a result, forest clearance was accelerated by the influence of differential attitudes; some started clearing for land occupancy, and other non-cooperating groups cleared forests because the resources were out of their hands. People from the plains started moving towards the hills. Such tendencies continued even after independence. For example, the Sal (*Shorea robusta*) forests of northern and central Bangladesh were well wooded when they were under Zaminders (GOB 1987). But when the Zaminders anticipated enactment of the *Bengal Private Forest Act 1945*, which sought to vest the management of private forests in the hands of the government, they wanted to reap as much resources as possible and engaged people to convert forestland to agricultural land (Bhuiyan 1994).

To stop such rapid clearance, before amending the *Forest Act* in 1901, the British authority passed a regulation in 1900 restricting movement of people from plain land to hilly areas. This regulation was also passed perhaps as a measure against the rebels who started to reorganise in the hilly areas after failure of the Soldier Mutiny of 1857. The transfer of land rights was also restricted, requiring the permission of the District Deputy Commissioner. However, the actions of land transfer were delayed, for legal reasons of time and arrangements required for fixing, collecting

and depositing land revenue. To overcome the problem, some measures were taken, such as changing revenue rules and rules related to dealing with public finances and the power of employees. Meanwhile the *Forest Act 1901* came into being prohibiting land clearance for land claim. These actions also acted as a component of the evolutionary process of forest policy.

**Table 1.** Indian forest regulations during the British period

Regulation	Year
I) Forestry Charter of India	1855
II) Regulation vii	1865
III) Indian Forest Act	1878
IV) Forest (Amendment) Rule	1891
V) Forest Act	1894
VI) Forest (Amendment) Rule	1901
VII) Forest (Amendment) Rule	1911
VIII) Forest (Amendment) Rule	1914
IX) Forest (Amendment) Rule	1918
X) Indian Forest Act	1927

Source: Adapted from Ali (1997).

Table 1 lists changes of forest regulations of the British regime and their time sequence. It is evident that the forest rules and regulations were amended frequently to consolidate the objectives of forest utilisation. The provisions under those laws were mainly to dispossess people from forest resource rights through declaration of forest areas, nature of resource disposal, duties of forest officers, revenue rate and collection method, treatment of wildlife and widely used minor forest resources (e.g. grazing), and punishment of offenders. It may be that the protection-oriented approach against the interests of the poor and rural illiterate people was the driver, perhaps influenced by a global modernisation hypothesis in development paradigms. Some rules were local but most were applicable for all over India. For example, the *Forestry Charter of India 1855* was a uniform law applicable to the whole country and was related to acquisition of valuable resources including teak (*Tectona grandis*) and sandalwood (*Santalum album*), although other activities including shifting cultivation, grazing and collection of fuelwood and traditional produce were allowed.

Gradually the British authority sought to prohibit people from accessing the forests, in order to maintain the supply of timber for government requirements. The charter was amended by regulation VII of 1865, allowing the reservation of the forest areas where valuable trees including teak and sandalwood were dominant, and public access in those areas was prohibited. The regulation of 1865 thus brought the forest areas other than teak and traditional areas under control. The independent Forest Service of India was also set up at that time to oversee the control measures and manage the conflicts with local people. Brandis (1897) and other forest officers observed that regulation VII of 1865 was not adequate to prevent people from entering the reserves. Rather, they became more aggressive towards utilizing the valuable trees of the forest whenever they had the opportunity. As a result of illegal

activities, it was necessary to introduce penalties for violation of forest laws. The *Indian Forest Act 1878* was passed with prescription of punishment for major forest offences (Brandis 1897).

The Act of 1878 was not applicable for Burma, for which a separate Act was adopted in 1881 for a special control of its rich teak forests (Bryant 1998). Bombay and Madras presidencies adopted different approaches because peasants were greatly agitated by the treatment they had received under the regulation of 1865 (Guha 1990). All other provinces were brought under the Act of 1878. This Act also outlined the duties and power of forest officers. The prohibition imposed by the policy necessitated close vigilance of forests, so additional staff members were employed. Prosecutions reached large numbers (Wild 1894, 1895, 1897 and 1899), and the forest staff became little more than policemen. People feared the staff but tried to resist the increased control.

The Act of 1894 established the foundation of a new concept of village forests. Provision was made to declare grazing land around villages as forest areas. Foresters were instructed to raise fodder trees, and people were taxed for grazing their cattle, on those lands. As a result, peasants for whom cattle were the main element in farming (as draught or cart animals) became unhappy. In some parts of India, organised demonstrations took place against the prevention of forest use. Peasants organised themselves not to give food and lodging to the forest guards (Saldanha 1998), and made agreements among themselves that they would not testify against each other if any were caught for illegal felling (Stebbing 1923). Around 1895, incidents such as demolishing tents of District Forest Officers and beating the head clerk and the *Habildar*<sup>6</sup> of the DFO took place when local demands were refused (Brandis 1897). As a result, the government had to amend the rules several times.

Gradually the forest-dependent people of India started to merge their movement with more popular claims – e.g. rice should be sold at Rs 1 for 4 mound (37.5 kg), the palm tree tax should be abolished, and the price of salt should be reduced – achieving popular support. Over time, issues of forests were also tied up with other issues involving people's livelihoods; people's attitudes towards forests were not only shaped by developments within forestry but also processes and activities beyond forestry. On some occasions polices and *Patels* (local influential people), created to help British administration, were used to suppress the movement (Saldanha 1998). Milward (1923) reported from Chittagong that forest users wanted to take advantage of the non-cooperation movement, the famous political phenomenon adopted by Mahatma Gandhi against the British regime. The locals robbed the forest depots, and burnt the forest office at Cox's Bazar. Finally, the colonials gazetted the *Indian Forest Act 1927*. This Act was the composite end result of evolutionary processes of development of the *Indian Forest Act 1878* through amendments for adjusting legal requirements of local demands.

The *Indian Forest Act 1927* delineated clearly the legal status of forest classification, duties and powers of employees, procedure for confiscation and punishment, and codes of practice. Out of 86 sections of the Act, 25 were concerned with forest reservation, 10 with protected forests and protection of forests on request of the owner, one on village forests, six on duty and transit of forest produce, seven on drift and stranded timber, 24 on penalties and procedures, and the remainder on

---

<sup>6</sup> A *habildar* is a person employed to ensure office security.

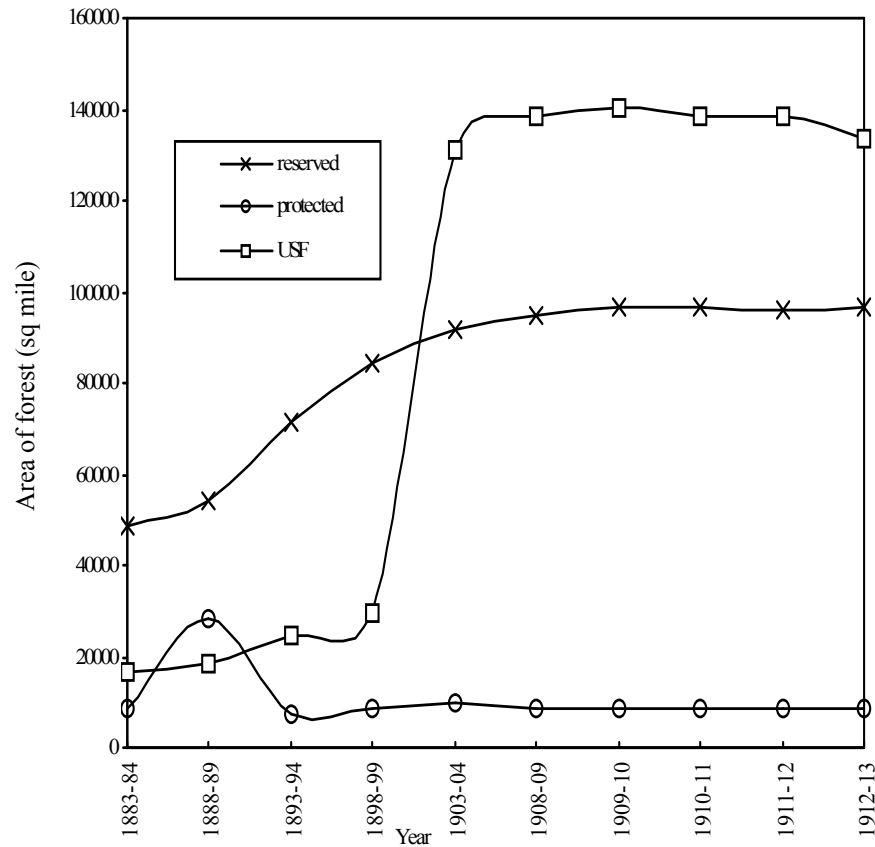
subsidiary and miscellaneous provisions. The core theme of these rules continued for many years, even after the British had left India. The attitudinal changes of people towards forests which were built up from changes of forest legislation and amendments during the British period also persisted, and perhaps have never returned to their earlier state, even after independence. Therefore, the foundation of people's attitudes developed during colonial rule was no different afterwards.

### **Forest Acquisition and People's Attitudes**

A critical impact, apart from those discussed above, concerns land tenure. The Act of 1878 was passed on the basis of the great land survey of India introduced in 1852 in which people were advised to produce their claim on any piece of land so that entitlement could be allocated before reserving the land (Saldanha 1998). Most people, particularly those who were illiterate and were happy with their traditional practices (e.g. potters, blacksmiths), were unaware of the land claim right. Only a few literate and non-caste clever people claimed the usurp right of land. As a result, when the survey was completed, some people became the landlords and others, including the tribals, found themselves in difficult positions when rights to use of land and forest were withdrawn. The landlord classes later appeared as *mahajon* (money lenders), thus a class clash on economic grounds emerged.

The *Indian Forest Act* of 1878 was amended in 1891 in response to public opposition, creating another type of forest where public access was selectively allowed. Figure 3 illustrates the types of forest and gradation of their acquisition over the period 1883 to 1912. The area of protected forest was increased during the period 1878-91, and subsequently the protected forests were gradually transferred to reserved forests. The sudden rise in Unclassed State Forest (USF) was perhaps due to the inclusion of areas of shifting cultivation and degraded land into a forest type under civil administration to increase the revenue from such land.

The frequent changes in legislation and regulations were an attempt to secure economic profitability of the state, not ecological sustainability of the forest. Nevertheless, opinion was building up among the English forest officers that economic profitability would not be secured without ecological sustainability. Symptoms of ecological degradation were noticed at an early stage of emergent forest management (Brandis 1897, Stebbing 1921), and pressure of traditional use of forestland was identified as the main reason. GOBeng (1894) also drew attention to the need to establish separate reserves for fuel, fodder and pasture in Chittagong and Orissa. Ultimately the *Indian Forest Act 1894* was gazetted to incorporate the ecological wisdom of that time as well as to accommodate the population pressure (Bryant 1998, Grove 1998). This Act adopted a legal definition of forests (which included areas whether they had trees or not which would be considered forests if declared by the authority), and classified the forests into those essential for climatic and physical environment, those for commercial purposes, minor forests, and pasture lands.



Source: Hill (1916).

**Figure 3.** Trend of forest acquisition in India under colonial policy 1883-1912

This Act widened the forest areas into grazing land where local people used to graze their cattle (under permit), whereas reserved forests and commercial forests were kept under the headings of forests for commercial purposes. Minor forests were areas where people were allowed to collect minor produce for their traditional and religious needs (under permit). The wasteland and pasture land area in India at that time was about 998,400 km<sup>2</sup> (over one third of total land area), over five times as large as the forest areas of Indian provinces, which were only 190,133 km<sup>2</sup> (Bose 1916). Brandis, the then Inspector General of Forests in British India, pushed to include wasteland in the forest area. His idea was that the large timber forests would furnish the backbone of the departmental revenue, the smaller areas could supply the local needs of people, and the wasteland could be supplemented for grazing and other local needs. To support the idea, at one stage Brandis (1897) also referred to the village forest concept prevailing in Germany. However, little such wasteland was

available in Bengal, and thus diverting away the local interests from forest to wasteland was not applicable.

## CONCLUSIONS

The flow of social exclusion, forest regulation and control over forest rights during colonial and post-colonial period in what is now Bangladesh had an adverse effect on the material and social condition of the forest dependents. The forest areas conceded to the village communities were found to be too small for a growing population. When ordinary people saw that their village headmen were powerless to restore their rights of forest use, the tradition of social respect and social cohesion was disrupted. People started behaving inconsiderately, disregarding the social norms. The incidence of forest crimes increased. Periodical outbursts of local resistance to forest regulators resumed from the 1920s, when people's discontent tended to merge with activists and agitators of the non-cooperation movement. People became uncompromising in their pessimistic attitude. Perhaps similar uncertainties and agitation induced the negative attitude of forest dependents. Thus, the social uncertainties of forest use and the competitive attitude of people continued beyond the colonial regime.

The forest organisations of independent countries of greater India followed the colonial administration. The alienation of people from the forests continued during the post-colonial regime. As a result, people's attitudes to forest resources remained unchanged. People considered that the government owned the forest, and therefore creating and maintaining forests is the government's responsibility. People were tempted to exploit the forest to meet their own needs. Environmental conservation and reduction of wastage were not their priority. They were uncertain whether they would be able to use forests they created. As a result, the age-old conservational attitude of traditional societies changed over time, resulting in forest degradation. However, it is expected that the recently introduced National Forest Policy Bangladesh will overcome some difficulties of the people who are highly dependent on forests. The impact of this policy on sustainable forest management and empowerment of forest communities is not yet clear.

## REFERENCES

- Ali, M. (1997), 'Status of environmental legislation in Bangladesh', *The Chittagong University Journal of Law*, 2: 59–78.
- Allen, J.C. and Barnes D.F. (1985), 'The causes of deforestation in developing countries', *Annals of the Association of American Geographers*, 75(2): 163–184.
- Apsey, T.M. and Reed F.L.C. (1996), 'World timber resources outlook: current perceptions with implications for policy and practice', *Commonwealth Forestry Review*, 75(2): 155–159.
- BHBP (1876), 'Forest conservancy in its popular aspect', *Indian Forester*, 2(1):1-16.
- Bhuiyan, M.A.A. (1994), 'Social Forestry as a strategy for economic development', in M.F. Ahmed (ed.), *Proceedings of a National Workshop*, 5–10 October 1991, Institute of Forestry, Chittagong, Bangladesh, pp. 23–26.
- Blaug, M. (1992), *The Methodology of Economics*, Cambridge University Press, Cambridge.
- Bose, S. (1916), *Some Aspects of British Rule in India*, The University of Iowa, Iowa City.
- Brandis, D. (1897), *Indian Forestry*, Oriental University Institute, Woking.

- Bryant, R.L. (1998), 'Rationalising forest use in British Burma 1856–1942', in R.H. Grove, V. Damodaran, and S. Sangwan (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 828–850.
- Buckland, C.E. (1894), Resolution No. 5671 on Progress Report of Forest Administration in the Lower provinces of Bengal for the Year 1893–94, Revenue Department Forests, Calcutta.
- Chandran, M.D.S. (1998), 'Shifting cultivation, sacred groves and conflicts in colonial forest policy in the Western-Ghats', in R.H. Grove, V. Damodaran and S. Sangwan, (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 674–707.
- Chester, E.G. (1896), Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1895–96, Bengal Secretariat Press, Calcutta.
- Chester, E.G. (1898), Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1897–98, Bengal Secretariat Press, Calcutta.
- Cowan, J.M. (1923), *Working Plan for the Forests of Chittagong Division*, Bengal Government Press, Calcutta.
- Dwivedi, A.P. (1980), *Forestry in India*, Jugal Kishore and Company, Dehra Dun, India.
- Farrington, H.A. (1918), Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1917–18, Bengal Secretariat Book Depot, Calcutta.
- Farrington, H.A. (1919), Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1918–19, Bengal Secretariat Book Depot, Calcutta.
- Farrington, H.A. (1921), Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1919–20, Bengal Secretariat Book Depot, Calcutta.
- GOB (Government of Bengal) (1987), Participatory Forestry in Bangladesh: Concepts, Experiences and Recommendations, Task Force Report to the Ministry of Agriculture, Dhaka, Bangladesh.
- GOBeng (Government of Bengal) (1894), Annual Agricultural Report of Bengal for 1892–93, Calcutta.
- Grove, R. (1998), 'Indigenous knowledge and the significance of Southwest India for Portuguese and Dutch construction of tropical nature', in R.H. Grove, V. Damodaran, and S. Sangwan (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 187–209.
- Guha, R. (1989), *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*, Oxford University Press, Delhi.
- Guha, R. (1990), 'An early environmental debate: the making of the 1878 Indian Forest Act', *Indian Economic and Social History Review*, 27(1): 67.
- Hajer, M.A. (1995), *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*, Clarendon Press, Oxford.
- Hamilton, W. (1928), *East India Gazetteer*, Vol. 2, Allen and Co., London.
- Haynes, E.S. (1998), 'The natural and the Raj: customary state systems and environmental management in pre-integration Rajasthan and Gujarat', in R.H. Grove, V. Damodaran and S. Sangwan (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 734–792.
- Hill, M. (1916), Note on an enquiry by the Government of India into the relations between forests and atmospheric and soil moisture in India, *Forest Bulletin*, No. 33, special issue.
- Homfray, J. (1924), Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1923–24, Bengal Secretariat Book Depot, Calcutta.
- Homfray, J. (1926), Annual Progress Report on Forest Administration in the Presidency of Bengal for the year 1925–26, Bengal Secretariat Book Depot, Calcutta.
- Hunter, W.W. (1876), *Statistical Accounts of Bengal*, Vol. 6, Trübner and Company, London.
- Lonergan, S. (1998), *The Role of Environmental Degradation in Population Displacement, Global Environmental Change and Human Security*, Research Report 1, IHDP, Bonn.
- Meyer, E. (1998), 'Forests, Chena cultivation, plantation and the colonial state in Ceylon 1840–1940' in R.H. Grove, V. Damodaran and S. Sangwan (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 793–827.

- Milward, R.C. (1921), Annual Progress Report on Forest Administration in the Presidency of Bengal for the Year 1920–21, Bengal Secretariat Book Depot, Calcutta.
- Milward, R.C. (1922), Annual Progress Report on Forest Administration in the Presidency of Bengal for the Year 1921–22, Bengal Secretariat Book Depot, Calcutta.
- Milward, R.C. (1923), Annual Progress Report on Forest Administration in the Presidency of Bengal for the Year 1922–23, Bengal Secretariat Book Depot, Calcutta.
- Modder, E.A.C. (1928), Annual Progress Report on Forest Administration in the Presidency of Bengal for the Year 1927–28, Bengal Secretariat Book Depot, Calcutta.
- Mukherjee, R. (1958), *The Rise and Fall of the East India Company: A Sociological Appraisal*, Veb Deutscher Der Wissenschaften, Berlin,
- Pouchepadass, J. (1993), 'Colonisation et demanagement ecologique en lade du sul', *Rev. Frnns d'list d'ontre-men*, 299,165–193.
- Saldanha, I.M. (1998), 'Colonial forest regulations and collective resistance, nineteenth century thana district', in R.H. Grove, V. Damodaran, and S. Sangwan (eds), *Nature and the Orient: The Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp. 708–733.
- Shebbeare, E.O. (1928), Annual Progress Report on the Forest Administration in the Presidency of Bengal for the Year 1926–27, Bengal Secretariat Book Depot, Calcutta.
- Stebbing, E.P. (1921), *The Forests of India*, Vol. 1, John Lane The Bodley Head Ltd., London.
- Stebbing, E.P. (1923), *The Forests of India*, Vol. 11, John Lane The Boldley Head Ltd., London.
- Stebbing, E.P. (1926), *The Forests of India*, Vol. III, John Lane The Boldley Head Ltd., London.
- Walsh, S.J., Rindfuss, R.R., Entwisle, B. and Chamratrithirong, A. (1999), Population-environment Interaction in NE Thailand: an Overview of an Ongoing Research, *LUCC Newsletter*, No. 4.
- Wild, A.E. (1894), Annual Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1893–94, The Bengal Secretariat Press, Calcutta.
- Wild, A.E. (1895), Annual Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1894–95, The Bengal Secretariat Press, Calcutta.
- Wild, A.E. (1897), Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1896–97, The Bengal Secretariat Press, Calcutta.
- Wild, A.E. (1899), Progress Report of Forest Administration in the Lower Provinces of Bengal for the Year 1898–99, The Bengal Secretariat Press, Calcutta.
- World Bank (2003), *The Little Green Data Book*, Washington, DC.